IDRC Business Model

Part of an environmental scan toward the next Strategic Plan

(Revised: February 2009)

Summary

The background papers respond to topics identified by managers and Governors. They identify some trends in the larger environment within which IDRC works and provide a perspective on current practice at IDRC. They are intended as 'food for thought' in preparing the next IDRC strategy.

This paper challenges the reader to reflect on what kind of organization IDRC wants to be. It seeks to stimulate thinking on how to ensure the identity and viability of IDRC in a changing landscape. The first section describes IDRC's approach, or business model, including its philosophy, critical assumptions, and organization. It also describes recent changes such as growth in revenue, more and larger partnerships with other research funders, and greater use of competitive calls for proposals and grants for institutional support. The second section looks at the changing landscape of development research. A generation ago, IDRC was a pioneer in the field of research-for-development, yet there are now a number of new funders and approaches. A number of insights on research are presented from outside evaluations and reports. This paper ends by identifying some of the critical issues facing IDRC at this moment. These include: being true to what IDRC is known for; being useful to Canada; staying responsive; remaining flexible; working with existing resources; and building a balanced portfolio.

1.1 Research-for-Development

A business model describes the value an organization offers as well as what is required for creating this value (Osterwalder et al. 2005). In other words, it describes both *what* is done and *how* it is done. A detailed business plan would describe how the Centre organizes itself to carry out its mandate; from strategy (mandate, mission, objectives) to operations (systems, processes, practices). This paper focuses more on the former, including how IDRC sees the world, what it wants to achieve, and the principles it follows (cf Conceico 2004, Davies 2005, Grantcraft 2006).

The origin and work of IDRC lies in the realization that science, technology and innovation drive development. There are numerous ways of describing this relationship, including:

- Research to address development challenges – for example agricultural research to boost yields and the nutritional value of crops
- Research as an indicator of development – the gap between science leaders and laggards is even greater than the more widely cited gap between high and low income countries
- Research as engine of development – innovations contribute to economic growth and advances in human well-being

This relationship between science and development has long been recognized within the literature and is the subject of numerous conferences and publications (Standke 2006, Pearson et al 1969, World Bank 1998). The ability to generate ideas is integral to a society's capacity to develop. On the one hand, research serves a substantive role. It provides knowledge for dealing with increasing complex and uncertain challenges, from the risk of pandemics to adapting to climate change. On the other hand, research serves a normative role, helping inform public debate on how to deal with these challenges. Economics has reinforced this point with new theoretical and empirical insights on how knowledge and innovation create and sustain growth (Cozzens et al 2008, Helpman 2004). As stated by Ismail Serageldin (Nature 2008), "Increasingly, a nation's wealth will depend on the knowledge it accrues and how it applies it, rather than the resources it controls. The 'haves' and the 'have-nots' will be synonymous with the 'knows' and the 'know-nots'". In short, all societies require the capacity to absorb, adapt and develop scientific and technical knowledge, to ensure research meets their own needs and problems.

This relationship has given rise to the field of *development research*. The IDRC Act (1970) defines research as "any scientific or technical inquiry or experimentation that is instituted or carried out to discover new knowledge or new means of applying existing knowledge to the solution of economic and social problems". This definition echoes the definition contained in the OECD Frascati manual, and includes both natural and social science. This field encompasses a spectrum of activities from research-*on*-development which seeks to understand how societies develop over time, to research-*for*-development which seeks to improve the lives of people in the developing world. The difference between these two extremes is whether they address international development as *subject* or *application*. For example, development research includes:

- activities to build capacity within the developing world to do, use, and manage research
- analysis to better understand development challenges and further human development
- inventions for poor people to generate income or otherwise improve their lives
- knowledge for donors or developing countries to reduce poverty and generate wealth
- scientific discoveries with the potential to bring about enduring changes

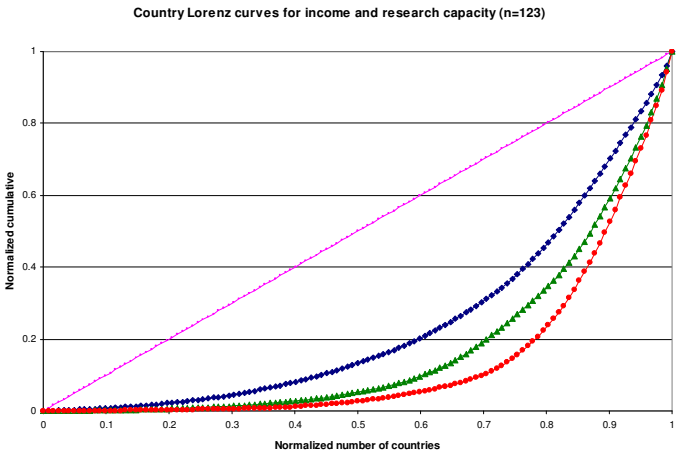

Figure 1: Global inequality in income (blue) is less than inequality in terms of the numbers of researchers (green) and research outputs (red)

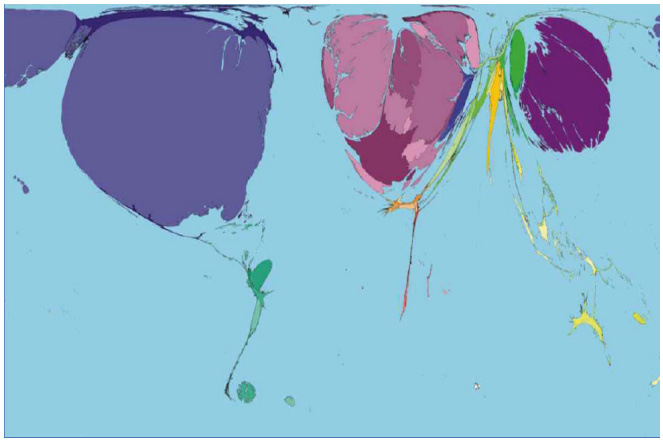

Figure 2: World map with size of country weighted by the annual value of patents, licences and fees received (Source: UNCTAD 2007)

1.2 What IDRC does – Philosophy and principles

IDRC supports researchers and innovators from developing countries, enabling them to take the lead in producing and applying knowledge for the benefit of their own communities. As such, IDRC invests directly in people and ideas, creating opportunities to experiment with potential solutions to the problems faced by the poor. IDRC is not merely in the business of distributing and stewarding research funding: its business is fostering innovative ideas, applying evaluation to find out what works, and bridging gaps amongst researchers and policymakers. This is the value the Centre brings to or creates for the researchers it supports, and those that invest in the Centre's work. The work funded by IDRC is targeted to a particular audience and intended to enable them to make a difference.

Under the IDRC Act the Centre's mandate is *"to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into the means for applying and adapting scientific, technical and other knowledge to the economic and social advancement of those regions"* (s4.1) This could be interpreted in many ways, yet IDRC has decided to be first and foremost a research supporter, rather than research performer. The Centre is more akin to a cross between a philanthropic foundation and a specialized granting council, rather than a development agency or think tank. This role is reinforced by the powers described in the IDRC Act:

- to enlist the talents of natural and social scientists and technologists in Canada and other countries
- to assist the developing regions to build up the research capabilities, the innovative skills and the institutions required to solve their problems
- to encourage generally the coordination of international development research
- to foster cooperation in research on development problems between the developed and developing regions for their mutual benefit

The bulk of IDRC's energy and resources are dedicated to supporting research excellence and building research capacity[1]. At a glance, these appear to be separate goals, yet they are mutually reinforcing. The opportunity to do research enhances the ability to do such work in the future. Beyond the short-term outputs of particular projects, IDRC contributes to the longer-term capacity of southern researchers and innovators to take the lead in producing and applying knowledge for the benefit of their own communities. Even in developed countries, science and technology strategies continually balance these goals. It is only natural that such a balance guides research cooperation with developing countries. Accordingly, the corporate strategy 2005-2010 states three goals:

- to strengthen and help to mobilize the local research capacity of developing countries (para 66)
- to foster and support research that leads to changed practices, technologies, policies, and laws (para 67)
- to leverage additional resources through partnerships between institutions in Canada and in the developing world (para 68)

[1] Research capacity is the ability to do, manage and communicate research (Neilson and Lusthaus 2007)

The driving principles of the Centre's business model are *responding to local development context, investing in ideas ahead of the curve,* and *supporting southern organizations*. These principles are reflected in how the Centre engages others. IDRC's strategy is to work with researchers in the developing world. The emphasis is on working directly with developing-country nationals and institutions, bringing in — but not imposing — views from outside where appropriate. The Centre primarily tackles problems of regional or global relevance, rather than defining a research agenda based on particular countries.[2] This strategy is in contrast to the work of actors who work in developing countries to expand the global pool of knowledge (i.e. France's *Institut de recherché pour le développement*) or working exclusively on development and how its happens (i.e. UK's Overseas Development Institute). The preposition used to describe the developing world –with, in, or on– indicates engagement in determining the research agenda, whether the developing world is an active research partner or passive research subject.

These principles also underpin who conducts the research and for whom it is intended.[3] IDRC's main "clients" are the people and organizations in the developing world who receive Centre grants and conduct the research. These "clients" include a variety of researchers, innovators and policy entrepreneurs located within civil society organizations, universities, government departments, and think tanks. Grants are agreements with a particular organization to support a specific team of individuals to research a particular problem and produce a particular set of deliverables (i.e. reports and activities). As such, IDRC grants support individual researchers and the organizations that host or employ them. The majority of support goes to the up and coming 'best and brightest' minds, talented people with the potential to contribute to their societies. Indeed, experience has shown many grantees go on to occupy key positions as political leaders, senior officials, recognized academics and practitioners[4].

The approach described above relies on a select number of critical assumptions, or core beliefs. When and where these assumptions do not hold, the Centre's business model may be undermined.

Research contributes to development – The capability to generate, interpret, and apply knowledge contributes to greater human freedom. In determining how and where to direct its support for research, the Centre responds to the priorities expressed by researchers and the policy community in developing countries who share the commitment to human rights. [5]

Research is relevant – IDRC is predicated on the conviction that knowledge is useful and acted upon to create positive change. Research outputs contribute to a global pool of knowledge with the potential to make a difference in the lives of poor women and men. Partners such as governments, civil society, and the private sector are willing to use these findings on a wider scale.

Focus on Southern voices – People in the developing world are critical to IDRC's relevance, sensitivity and success. They are involved in every aspect of how IDRC works. Projects are

[2] Exceptions include support to South Africa in the 1990s, Kenya in 2002, and Cambodia in 2007.
[3] Scoones and Leach (2006) define a 'slow race' of adapting S&T to local contexts and involving beneficiaries in defining the problem, solution and research agenda. Such an approach clarifies 'why' and 'who for' behind research agendas.
[4] Examples include Presidents Ricardo Lagos of Chile, Fernando Henrique Cardoso of Brazil, and John Atta Mills of Ghana; Science Ministers Chung Kun Mo of Korea and Venâncio Massingue of Mozambique; and OECD Secretary General Angel Gurria.
[5] Corporate Strategy 2005-10, para 57

proposed, designed, carried out and, whenever possible, administered by teams of researchers and organizations in the South. Regional Offices are vital for providing this focus, being located where the development problems need to be addressed and in touch with emerging priorities.

Research requires persistence – IDRC takes a long-term view of its investments. Projects are experiments, not every grant will result in a development success yet all contribute to creating a pool of knowledge regarding different technologies, policies and practices that work (or don't) and under what circumstances. Promising ideas can take a long time to evolve from field work and testing, through to dissemination and eventual changes in the lives of poor women and men.

IDRC is useful to Canada – The Centre is a valued member of Canada's foreign policy family and research landscape. The Minister represents IDRC in Cabinet and before Treasury Board, the Treasury Board sets the governance framework, and the IDRC Board of Governors sets the Centre's strategic direction. IDRC is able to tailor its administrative and financial rules to its size and line of business to give it the flexibility, agility and independence that it needs to work effectively.

1.3 How IDRC does it – Organization and processes

IDRC invests financial, human and intellectual resources ('grants-plus'), combining both monetary support to cover the costs of conducting research as well as the time and effort of IDRC staff in mentoring, encouraging and monitoring partners. IDRC staff are themselves highly specialized in research, thus engagement with partners is akin to peer learning. Staff are valued for their knowledge of the research substance, local development contexts, and the people involved. IDRC invests significant time and effort in getting to know the research themes and individual researchers and in monitoring the research process within each project. This knowledge helps staff to manage risks in the research process, as well as anticipate and respond to future research priorities.

IDRC creates opportunities for critical inquiry that would not otherwise exist. The Centre supports researchers and innovators to develop their own ideas, through field work and empirical testing. Such opportunities are scarce compared to consultancy or contract-based research. IDRC provides support in framing the problem, guiding research design, and selecting research methods. This support can come through formal training - such as short courses or scholarships within projects - or through less formal mentoring with IDRC staff and more established researchers. IDRC also provides its grantees with electronic and physical access to research materials and partners, including access to a global network of expertise and to peers working on similar problems elsewhere. The Centre's international reputation can also enhance the credibility of partners in their domestic landscape, improving their access to policy makers and their ability to inform public debate.

IDRC remains engaged throughout the research process. Beyond assessing proposals and checking on expenditures and deliverables, IDRC engages individual researchers, knowing the substance and context of their work. IDRC staff travel to monitor projects in person, to understand the challenges partners face, and how they are contributing to the larger efforts to reduce poverty. IDRC hires people who are highly-qualified in science, engineering, and international development, as well as experts in the areas of donor partnership, research communication, finance, audit and evaluation. A recent survey of former recipients affirmed that IDRC is valued for supporting research on important development challenges and working with

local people to develop their own ideas (Globescan 2008). It suggests that some of IDRC's key strengths are the expertise of its staff and their involvement in the research.

IDRC makes its programming choices through various elements, including:

- An overall strategy[6] describing vision, corporate goals, programming principles and the framework within which programs are developed
- Five-year programs approved by the Board and implemented by professional staff making grants intended to further the objectives and expected outcomes in a particular research theme (prospectus)[7]
- External reviews of these programs on their relevance and effectiveness
- Grants (projects) within Board-approved programs to support extramural research intended to empower people and experiment with ideas
- Matrix management structure to combine geographic –the Americas, Africa, Asia, and the Middle East– and thematic dimensions of research
- Regional Offices –located where the development problems need to be addressed– to ensure that research is relevant, to provide stewardship of grants in the field, and to share findings directly with the people who can best use them

As research is a process of discovery, amenable to uncertainty and surprise, *grants* are designed with the ability to adapt to changing conditions. Grants are experiments, enabling researchers to both enhance their skills and learn what knowledge and solutions work (or not) in a particular context. Monitoring and evaluation seek to uncover the nuanced story of who, how and why objectives were (or were not) met. IDRC program staff add value throughout the research process, including the beginning (project design, budgeting), middle (monitoring progress) and end (dissemination, communication). When appropriate and feasible, IDRC devolves the responsibility for program coordination, administration, and management to institutions in the developing regions of the world[8]. IDRC takes risks knowingly and adjusts the level of monitoring accordingly; if necessary the Centre modifies, suspends or cancels projects that are not working well.

IDRC's programming portfolio can be described as a mixture of activities that invest in pressing *problems*, promising *partners*, and talented *people*. Any particular project integrates all these dimensions, yet there are subtle differences depending on the primary purpose of each project. On the one hand, IDRC concentrates "on building research capacity principally in terms of improving individual researchers' opportunities to undertake research and the methodologies they use to do it" (corporate strategy 2005-10, para 50). On the other hand, IDRC contributes "to building a favourable environment within which research can be carried out and which provides opportunities for individual researchers in the South" (para 69). IDRC programming ranges from modest support to new partners and ideas, to moderate support to proven partners, research networks or consortia to tackle global issues or those of particular relevance to the developing world.

Problem-based – IDRC's entry point is selecting the problems to be addressed. Funding goes to discrete projects supporting small teams of researchers affiliated with one or more

[6] Currently called the Corporate Strategy and Program Framework 2005-2010, or CS+PF

[7] Prospectuses provide detail on the questions of relevance (why), method (how) and audience (for whom) that lie behind the research agenda.

[8] Program Framework 2005-10, para 50. IDRC prefers to have recipient administer funding within grants (RAP) rather than administer different costs directly.

organizations. Such projects seek to improve the understanding of development problems and inform subsequent action by others. Grants cover research expenses such as equipment, travel, training, evaluation, personnel/consultants, etc. IDRC engages grantees on questions of how research is done, including problem definition, methods and dissemination. These grants lie within a program 'prospectus'. Programming opportunities are identified through a variety of mechanisms including unsolicited submissions, the efforts of staff to identify talent and ideas, and competitive calls for proposals.

Partner-based – IDRC's entry point is selecting the promising organizations. Funding goes to organizational grants that further the research programs developed by grantees. A portion of such grants contribute to the grantee's core management and administration costs. Such support seeks to provide skilled researchers with a home and opportunity to work in their countries. IDRC engages grantees on research directions, how research is used, and the grantee's position in the larger landscape of development actors. The value added by IDRC is improvements in their ability to manage funds, communicate, and connect with others. For example, the Think Tank Initiative provides a combination of general support funding and access to training and technical support to permit the organizations to achieve improvements in research quality, policy linkages, and other aspects of organizational performance. Programming opportunities are identified among existing grantees or through competitive calls.

People-based – IDRC's entry point is identifying talented researchers and individuals. Funding goes to training opportunities and awards, such as fellowships, scholarships, and internships. Such support seeks to create motivated and skilled people with the energy and insight needed to address pressing development challenges. The majority of these awards correspond to IDRC's research program areas, reinforcing the problem-based approach and ensuring that IDRC has sufficient in-house expertise to assess the merits of the training and awards applications. The Centre engages grantees at various stages of their career, from young researchers to distinguished professionals. Programming opportunities are primarily identified through competitive calls.

The Centre strives to both *anticipate* and *respond* to the developing world's demand for research. This means striking a balance between investing in ideas before their time and seizing unexpected opportunities. For example, IDRC worked proactively to build the field of ecosystem approaches to human health, or Ecohealth. With the sudden outbreak of avian influenza, the Centre adapted this work to identify practices in backyard that poultry reduce the risk of pandemic diseases. IDRC programming includes a balance between activities intended to address future and current challenges, through new research and expertise as well as mobilizing existing knowledge and talent.

Networks are used as a means to achieve program objectives. Some IDRC grants provide moderate support to a *research network* involving research teams at different organizations (e.g. regional Communities of Practice in Ecohealth (COPEH), a global Poverty and Economic Policy network, LIRNEAsia on information and communication technology policy). Other grants create an interconnected *network of projects* on related themes (e.g. 'Focus City' projects link teams working to ease environmental burdens in different places). In both instances, IDRC enables comparative research, building on insights from different places, and helping connect researchers and innovators across and beyond the developing world.

Four limits of IDRC's model help to clarify the Centre's work.

- IDRC programming is not place-based. Research is always carried out somewhere, yet each program chooses the particular locations with Regional Directors commenting on program strategies and priorities in their region.
- IDRC seldom works with Noble laureates and elite researchers. Instead the Centre focuses on the up and coming 'best and brightest' minds with whom the Centre's resources can make the most difference.
- IDRC does not make substantial investments in research infrastructure. The potential costs are simply too large[9].
- IDRC does not take ideas to scale once they are proven. The IDRC Act limits the Centre to carry out research 'to the point where the appropriate results can be applied' (s4.2b).[10]

IDRC works with others to broaden and deepen research cooperation in the developing world. Partnering is the concept of working collaboratively with other individuals or organizations to achieve mutually beneficial objectives. It covers a range of activities from sharing information to pooling resources. Partnerships with other G8 nations, philanthropic foundations, and civil society create new opportunities to coordinate global efforts to increase effectiveness in research. For example, work to strengthen health research systems has relied on partnerships with Wellcome Trust, DFID and CIDA to provide the scale of resources needed. These partnerships increase the scope and impact of Canada's investments; increase the capacity, reach, influence and resources of developing country researchers; and, facilitate knowledge sharing and exchange for development.

1.4 Recent changes

IDRC's approach has changed incrementally over the past five years to adapt to increased revenue, larger partnerships, and additional ways to deliver programming.

IDRC's *revenue* increased over 50% in the past seven years (table 1). The Government of Canada provides the majority this revenue, in the form of a Parliamentary appropriation from the International Assistance Envelope (IAE). The government has become more involved in deciding how its funds will be used, adopting a more competitive process for allocating additional funding within international assistance. This requires IDRC to propose ex-ante how it intends to use additional funds. It also makes future programming partially dependent on interdepartmental negotiation and Cabinet-level decisions[11] that allocate resources according to how proposed programming is aligned government priorities. Recent experience, including the 2007 Treasury Board Strategic Review, also suggests that the base amount of the IDRC appropriation is subject to revision. Governors have advised management to pursue opportunities where the Centre's mandate intersects with the government's policy priorities.

[9] The IDRC Act does grants the Centre "to establish, maintain and operate information and data centres and facilities for research and other activities" (s4.2a)

[10] This partially explains why a survey of former recipients suggests that IDRC is relatively weak on following through and implementing research findings (Globescan 2008).

[11] A Memorandum to Cabinet is developed through negotiations among CIDA, DFAIT, Finance, Treasury Board Secretariat and the Privy Council Office. Since 2005, over 30M of increased funding for IDRC was decided through this process. IDRC's share of the IAE has fallen from 4.3% in 2001 to 3.2% in 2007 (Canada 2007).

External funding is expected to account for one-fifth of IDRC expenditures in 2008-09. A relatively large *partnership* for IDRC five years ago would approach CAD$1 million, yet a number of current partnerships now exceed CAD$10 million. Whereas partnerships were valued at CAD$21 million in 2003-04, they are expected to amount to CAD$71 million in 2008-09. Further, the number of donor partnership agreements in excess of one million dollars grew from four to over twenty in this same period, including with CIDA, the UK Department for International Development, the Gates Foundation, the Hewlett Foundation, Microsoft and the Wellcome Trust. Partnerships with Canadian research funders have also grown, and the announcement of the Development Innovation Fund suggests that they will continue to in the near future.

IDRC has made greater use of *competitive calls* for proposals and grants for *institutional support* over the past five years. IDRC often works with short-listed research teams, providing seed funds for preparing full proposals. This helps create a more level playing field and avoid a bias towards better proposal writers. Competitive calls do not automatically lead to research networks, yet IDRC can provide opportunities for face-to-face meetings among grantees as well as platforms for virtual sharing and collaboration (Bernard 2006). In addition, IDRC has provided institutional support including quasi-core grants to proven partners or activities to help strengthen research organizations.[12] Adding these modalities to the way IDRC delivers programming, may require less engagement with grantees as established researchers can desire greater autonomy, and mentoring may be provided by others. In contrast, institutional support implies a role for staff in discussing strategy and management, or helping to define research agendas and business plans. These modalities do not replace existing roles of talent-spotting, assessing proposals and deciding what to fund; but they do influence how staff allocate their time and effort.

Together these changes have influenced *how IDRC organizes itself*. Growth has required adapting and documenting Centre practices for assessing projects, making decisions, managing risk, etc. Other systems and procedures have adapted to handle externally-funded programs, including grant administration, financial planning and staff recruitment. In comparison to the past, larger programs have included more staff spread over more offices, forcing changes in how teams organize themselves such as holding team meetings over skype or using a wiki to collaborate and track outputs.

Table 1: Impact of Increases in Canada's international assistance

	2007-08	***2006-07***	***2005-06***	***2004-05***	***2003-04***	***2003-02***	***2002-01***	***2001-00***	***2000-99***	**Peak**
Parliamentary Appropriation (10^6)	149.7	144.8	132.0	122.3	107.9	97.6	97.2	91.2	90.3	114.2 *(88-89)*
Program Allocations (10^6, funded by Parl.)	145.0	112.8	97.2	86.3	75.3	62.9	55.0	43.6	46.9	--
Program Expenditures (10^6 funded by parliament)	100.2	82.7	79.2	77.1	62.6	61.4	51.0	55.6	58.8	--
Program Expenditures (10^6 funded by partnerships)	26.1	18.6	16.0	14.4	14.5	36.5	47.5	39.8	43.3	--
Staff (full time equivalents)	455	446	371	354	351	335	314	332	347	595 *(89-90)*

SOURCE: Data for 'actual' from Annual Report and PWB, dollar figures have not been adjusted for inflation,
NOTES: Partnerships do not include recovery of administrative costs; values for 2003-04 and earlier include secretariats that were somewhat autonomous of regular IDRC programs. Staff numbers do not include project-based positions

[12] See note for Annual Learning Forum 2007. IDRC experience includes similar support to FLACSO, BAIF, SISERIA, etc.

2.1 Landscape of Development Research

This section looks at the changing landscape of development research. IDRC was a unique entity when it was created nearly forty years ago, yet now operates alongside an increasing number of 'competitor' institutions. At the same time, the 'rules of the game' in research are changing. Annerstedt and Kiyanage (2008) identify a number of recent trends including rising research investments in developing countries and increasing mobility of researchers. Compared to a generation ago, science plays a larger role in more aspects of economy and society. As such it has moved from being "apart from" society, to becoming "a part of" the economy. Increasingly research is driven by market forces and end-user demands. Researchers are expected to act more like entrepreneurs and less like academics.

IDRC is an organization that bridges the world of innovation (research funding) and development (foreign aid). The Centre can be considered a *research donor,* a research funding organization specialized in international development.[13] The overlap between these worlds is expanding, as parts of the developing world are strengthening their own aid programs and research funding. At the same time, researchers in the developed world are increasingly working beyond their borders; it is getting easier for developing world researchers to participate in international collaborations.

The organizational logic of research funders differs from that of development assistance. Research funders focus on individuals and organizations working on specific problems or research themes, whereas development assistance focuses on particular sectors and countries. Coherence within development assistance depends on alignment with recipient governments and harmonization among donors. Coherence within research funding depends on ensuring a vibrant research agenda and complementarity among funders. Development assistance intends to create the conditions for countries to sustain their own efforts to reduce poverty, while the funders of research-for-development create the conditions for people to address their own problems.

This section begins by identifies different roles, outputs and trends within the research landscape. This is followed by insights from other research funders.

Table 2: Comparison of organizational logic

Development Assistance	Research Funders
Align with partner country government	Anticipate research problems and demand
Reduce poverty	Vibrant research and innovation community
Millennium Development Goals, sectors within countries	Knowledge needed to understand and solve problems
Coordinate with other donors to harmonize development assistance	Compete and cooperate with other funders to provide options

[13] IDRC has participated for many years in the International Forum of Research Donors (IFORD), a network for information sharing among organizations that have a mandate to support research in developing countries. Members include aid agencies, international research funding organizations, and philanthropic foundations.

2.2 Roles and outputs

IDRC is itself an actor in the wider research funding landscape that includes aid agencies, granting councils, universities and think tanks. IDRC's business model flows in part from how the Board and management define the Centre's role within this landscape and how the Centre engages others. A simple way of distinguishing among these actors is to identify their role in research, whether as performers, supporters, brokers, or builders. The annex describe a sample of organizations involved in supporting or performing development research.

Performers contribute to knowledge by sponsoring work in-house, carried out by researchers on staff. Expenses are primarily payroll and operating costs; performance tends to be measured in terms of papers published, discoveries made, or patents filed. *Supporters* encourage others to work on particular themes and enhance their skills. Expenses are primarily grants for particular research expenses and a modest amount of professional staff. Performance can be described in terms of outcomes that might improve people's lives. *Brokers* bring together people, money and other inputs as needed to solve particular problems[14]. Expenses are primarily networking, travel and events; performance can be described in terms of the number or value of partnerships brokered. One example is the InnoCentive portal, funded in part by Rockefeller Foundation, to match funding, researchers, and users to address the challenges facing poor or vulnerable populations around the world. *Builders* provide systems and infrastructure needed for research to take place. Expenses are primarily grants for operating or capital expenditures. Performance can be described in terms of longer-term changes in the numbers of people trained, national investment in research and development (R&D), and examples of evidence-based decision making.

Each organization can have a different understanding of how its interventions affect the world, including who are its beneficiaries and what it contributes. A brief scan of research organizations suggests two sets of possible outputs.

A first set of outputs sees research as an ends, with findings applied to development. This includes activities which intend to create or diffuse *technologies* that help the poor, or *evidence* that informs development thinking and practice. Examples of technologies include the 'can-tenna' for boosting wireless signals, backyard systems for treating and reusing greywater, or insecticide-treated bednets to control malaria. This work relies on research users who adopt and scale-up of the technology. Examples of evidence include understanding how poor people make a living in marginal environments. Research supports observational or experimental research that identifies what works or debunks "myths" or preconceived ideas about development. This work relies upon the existence of an interested audience willing to learn from this evidence. This set of outputs is implicit in the current IDRC goal for "research that leads to changed practices, technologies, policies, and laws".

The second set of outputs sees research as a means, with the research process itself generating development. This includes activities which seek to reinforce *individuals, organizations,* and research *systems* within the developing world. Individuals can apply their skills to working with the poor and better understand development challenges. Organizations provide these individuals with support to define their own research agenda, work with peers, and share their work. Research networks are a form of virtual organization that connects researchers working in different locations. Finally, research systems create the environment for

[14] This role was mentioned in the 1991 IDRC Strategy 'Empowerment through knowledge'

doing and using science, such as support to universities for research and training, or advice and networking for science policymakers. This set of outputs is implicit in the current IDRC goal to "to mobilize the local research capacity of developing countries".

2.3 Research funding

In identifying and reaffirming the IDRC business model, it is important to keep in mind the efforts of other organizations that share a similar commitment to research-for-development. Ideally, IDRC should either add value to the efforts of others or provide something that is missing in the research funding landscape. IDRC was a pioneer when it was established. It represented a new approach to cooperation with developing world. Since that time, many more organizations have begun to offer support for research-for-development, including donor agencies, developing countries themselves, and the private sector.

Official development assistance reached USD $103 billion in 2007. While research represents only a fraction of this amount, it is supported by an increasing number of donors, including Ireland, Australia, Portugal and Spain. Emerging economies, such as China and India account for an increasing part of the over USD $ 800 billion a year invested in research worldwide (National Science Board 2008)[15]. Over the past two decades, countries ranging from Nicaragua to Mozambique have established the building blocks for national research systems such as granting councils, science academies, and S&T policies. At the same time, private sector funding of research is estimated to be twice that of public sector sources (Graham and Woo 2009). The bulk of this funding is related to industrial research and commercialization, yet there is increasing support for development research. The influence of private foundations is not merely in the size of the resources they command, but in their willingness to experiment with new approaches to funding.

How should IDRC best position itself in this landscape going forward? On the one hand, Canada is the third most important contributor to development research (Jones and Young 2007). On the other hand, IDRC is in the retail end of the market of research funding. The Centre's resources are insufficient to fund a vast number of large-scale clinical trials or decade-long commitments to build up universities or national systems. At 3% of Canada's official development assistance, IDRC's resources are smaller than those of Gates Foundation, DFID Research, and the increasing foreign aid and research investments made by developing world itself.

[15] Asia (30.2%), South America and the Caribbean (2.2%) and Africa (0.6%)

2.4 Learning from others

A number of recent reports offer additional insights into funding research-for-development.

- Bezanson and Sagasti (2005) argue that development is not so much a problem to be solved, but a condition from which to evolve. They argue that development research needs to be tailored to context, connecting local experience to global forces and vice-versa.
- In a review of Sida/SAREC, Rath et al. (2006) highlight the value of having specialized staff who combine subject-matter expertise with the ability to engage with stakeholders and decision makers. These authors caution that a high ratio of grant-value-to-staff can sacrifice time for reflection and planning, forcing staff into a narrow, box-checking approach to research monitoring.
- In an evaluation of World Bank research, Banerjee et al. (2006) note that developing countries are demanding less in terms of financing and more in terms of options to deal with complex issues. These authors argue that research programs need to be rigorous, relevant and responsive.
- In an evaluation of Netherlands' development research programs, Bouwers and van der Kraaij (2007) caution against dogmatic application of a single modality of research support. They argue instead for a combination of approaches within a coherent research program.
- Wagner (2008) uses time and scale to distinguish different research challenges. For example, responding to pandemic disease is acute and global, while improving crops in poor soil conditions is chronic and local.

Jones and Young (2007) scan twenty of the largest funders of research-for-development and found variation in the approaches used for identifying projects, the type of organizations funded (academic, civil or governmental in the north or south), and the degree of support for north-south and south-south linkages. Jones and Young argue that entrepreneurial staff drives performance. Highly-regarded donors seek out cutting-edge research and talented partners, they dedicate time and energy to advise grantees, and they facilitate linkages among groups with a stake in research findings. These authors suggest a need for shared definitions and comparative data on expenditures on development research,[16] and found IDRC was highly regarded for its role in supporting innovation, capacity building, mentoring, and focusing on research-policy linkages. In a subsequent report, Jones et al. (2007) highlight the importance of funding proposals led by Southern institutions, and ensuring Southern partners have a voice within the funding mechanisms of north-south partnerships.

Separate governance arrangements and budget lines dedicated to research are key. Although SAREC was incorporated into Sida in 1995, it retained a unique identity as a government-appointed research council decided its focus and projects. Banerjee et al. (2006) argue for greater independence in the World Bank's research work in order to avoid undue influence from political and operational exigencies. DFID has committed a budget of around £650M to fund new research in its 2008-2013 strategy. France and Sweden each dedicate about 6% of their ODA to research (Gaillard 2007, Sida website). Canada's federal budget has identified development research as one of five purposes of the International Assistance Envelope, yet funding commitments have been to the envelope as a whole rather than to individual purposes.

[16] Development research is not well represented within the work of the OECD, whether for development (DAC) or science (STI).

A report on Canada's grants and contributions recommended that government provide multiyear commitments to fund the research granting councils, given that the councils make multiyear grants for funding research (Clark et al. 2006). IDRC is increasingly working with these research granting councils as they begin to fund international collaborations, thus bridging the budget lines for international assistance and for funding Canadian researchers. DFID and others are similarly engaging their domestic research communities.

Research requires time, so research organizations often have a five-year planning horizon (IDRC, SDC, DFID). Such planning engages a range of partners, both horizontally to ensure complementarity with other research organizations, as well as vertically towards "clients" such as research users, potential grantees and political masters. The approach used by IDRC and DFID is to state what they view as their research themes; and use consultation as a means to: (i) assess regional trends affecting development, (ii) identify potential entry points for the chosen research themes, and (iii) gather advice on crosscutting questions, such as how to identify research demand, ensure science benefits the poor, and get research into practice.[17]

Annerstedt and Kiyanage (2008) argue that it is no longer enough to focus on building local research capacity. Instead they suggest that support is needed to strengthen the bridges between science, the economy and the rest of society. They recommend a systemic approach to funding which embeds research activities within the wider socio-economic fabric. Wagner (2008) suggests that international collaboration and self-organizing networks are becoming more common in science. She argues that what the developing world most needs is the ability to a) link domestic researchers to global knowledge, and b) sink the attention of foreign researchers into local development challenges. This implies an ability to design, develop and carry out collaborative research to an international standard within different cultural contexts.

[17] Public Consultation Document on DFID's Research Strategy 2008–2013

3. Implications

How to implement the IDRC mandate is not a question to be resolved, but landscape to be navigated. There have been numerous pieces that reflect on IDRC's business, ranging from President's Hopper inaugural speech, to the current strategy. IDRC continues to face a large number of strategic issues identified in these documents. This paper ends by identifying some of the critical issues facing IDRC at this moment. Ensuring the identity and viability of IDRC into the future depends, in part, on how the Centre responds to these issues:

Being true to one's self – The international landscape for research funding is changing, with new funders and new ways of funding research. IDRC has used a 'grants plus' business model in which it invests financial, human and intellectual resources in researchers and innovators from developing countries. This approach sets it apart from "competitors" working in development research.

Being useful to Canada – The majority of IDRC revenue is in the form of an annual Parliamentary appropriation. Governors have advised management to pursue opportunities where the Centre's mandate intersects with the government's policy priorities. IDRC's programming needs to be focused enough be coherent, yet flexible enough to respond to partnership opportunities and government priorities.

Staying responsive – Through International Assistance Envelope, the Government of Canada expresses what it wants to fund. At the same time, through growing partnerships IDRC pre-commits a portion of the Parliamentary appropriation to various programs. Together these trends somewhat mortgage future funding, reducing the degree to which IDRC can respond to areas outside the current priorities of partners and the government.

Remaining flexible – The Centre will need to be nimble, able to quickly ramp-up or wind-down programs as needed. Responding to changing opportunities requires time and energy from staff across the Centre. There is a particular demand for experienced staff already familiar with IDRC procedures, and with deep knowledge of the research and researchers involved.

Working with existing resources – The options for pursuing different business models are limited by financial reality. The trick is to have a balance that matches the Centre's funding and people with the demands of 'clients' across and beyond the developing world. The types of support offered and value added by IDRC have consequences for the Centre's cost structure and how staff engage the research the Centre supports.

Building a balanced portfolio – At one level, the Centre research themes –currently environment, innovation, ICTs, social and economic policy– tie the Centre's business together. Strategy can also provide insights on the type of support offered and what constitutes "success" in furthering the Centre's mandate. For example, laying out how the Centre's work is expected to generate outcomes and results.[18]

[18] In the words of Jim Mitchell, focus on "finding the cure for cancer, rather than studying the human body", Sussex Circle, author of a review of Canada's federal granting councils, Senior Management Committee meeting 13 June 2007

References

Annerstedt, J. and S. Kiyanage (2008) Challenges when shaping capabilities for research: Swedish support to bilateral research cooperation with Sri Lanka and Vietnam. Sida Evaluation 08/14.

Banerjee, A. et al. (2006) *An Evaluation of World Bank Research, 1998 – 2005*. World Bank: Washington, DC. [online] http://siteresources.worldbank.org

Bernard, A. (2006) *Lessons from IDRC evaluations on competitive grants: a review of five evaluations*. [online] http://idrinfo.idrc.ca

Bezanson, K. and F. Sagasti (2005) Prospects for development thinking and practice. Paper submitted to Rockefeller Foundation. [online] http://www.rockfound.org

Bouwers, R. and F. van der Kraaij (2007) *Evaluation of the Netherlands' research policy 1992-2005*. IOB Evaluation no. 304. Dutch Ministry of Foreign Affairs: Hague, Netherlands.

Canada (2007) *Canada's performance report 2006-07* Treasury Board Secretariat: Ottawa, Canada.

Conceição, M. (2004) Cooperação internacional, desenvolimiento e ciência na periferia. *Horizontes, Bragança Paulista* 22(2): 191-204.

Cozzens, S.E. et al. (2008) 'Knowledge and development' in Hachett, E.J. et al. (Eds.) *The handbook of science and technology studies, 3rd edition*. MIT Press: Cambridge, MA.

Clark, I.; F. Lankin and M. Tellier (2007) *From red tape to clear results*: Report of the Independent Blue Ribbon Panel on Grant and Contribution Programs [online] http://www.brp-gde.ca

Davies, R. (2005) Scale, complexity and the representation of theories of change. *Evaluation* 11(2)

Easterly, W. (2006) *White Man's Burden*. Penguin Press: New York, NY

Gaillard, J. (2007) 'The French approach to supporting and strengthening S&T activities in and for developing countries' short note prepared 19 June 2007.

Globescan (2008) IDRC perceptions survey 2008. Globescan: Toronto, Canada.

Graham, M. and J. Woo (2009) *Fuelling economic growth: the role of public–private sector research in development*. Practical Action Publishing and IDRC.

GrantCraft (2006) Mapping change: using a theory of change to guide planning and evaluation. [online] http://www.grantcraft.org

Helpman, E. (2004) *The mystery of economic growth*. Harvard University Press

Jones, N. and J. Young (2007) Setting the scene: situating DFID's research funding policy and practice in an international comparative perspective. A scoping study commissioned by DFID Central Research Department. Overseas Development Institute: London, UK.

Jones, N; M. Bailey and M. Lyytikainen (2007) Research capacity strengthening in Africa: trends, gaps and opportunities. A scoping study commissioned by DFID on behalf of IFORD. Overseas Development Institute: London, UK.

Nature (2008) *A World of Science in the Developing World*. Supplement for the 25th anniversary of TWAS, the academy of sciences for the developing world. [online] http://www.nature.com/twas/.

Neilson, S. and C. Lusthaus (2007) IDRC-supported capacity building: developing a framework for capturing capacity changes. Part of IDRC strategic evaluation. Universalia: Montreal, Canada

Osterwalder, A.; Y. Pigneur, and C. Tucci (2005) Clarifying business models: origins, present and future of the concept. *Communications of the association for information systems* 15. [online] http://www.businessmodeldesign.com

Pearson et al. (1969) *Partners in development: report of the commission on international development.* Praeger: New York, Washington and London.

Rath, A. et al. (2006) SAREC Support to International and Regional Thematic Research Programs, 2000-2005, Sida Evaluation 06/40:1. [online] http://www.sida.se

Sagasti, F. (2004) *Knowledge and innovation for development: the Sisyphus challenge of the 21st century.* Edward Elgar Pub: London, UK.

Scoones, I. et M. Leach (2006). *The slow race : making technology work for the poor*, Demos: London, UK.

Standke, K.H. (2006) Science and technology in global cooperation: the case of the United Nations and UNESCO. *Science and Public Policy* 33(9): 627-46.

UNESCO (2005) *World science report*. UNESCO: Paris, France.

World Bank (1998) *World development report 1998/99: knowledge for development*. Oxford University Press.

Wagner, C. (2008) *The new invisible college: science for development*. Brookings Institute: Washington, DC.

Annex: Examples of Research Supporters

Name	Mission	Strategy	Business Model	Metrics	Budget (million/yr)	Staff	Year (Annual Report)
Bill and Melinda Gates Foundation	All people have the chance to lead healthy, productive lives	Opportunities for people to lift themselves out of hunger and poverty, lifesaving advances in health are created and shared with those who need them most	Large-scale grants to organizations to deliver specific solutions (i.e. vaccines, financial services, libraries)	Impact in terms of health and opportunity	US 2101 in grants	360	2007
Department for International Development (UK)	Eliminate poverty through achievement of the MDGs	Reduce poverty in poor countries by developing new technologies and policy-related knowledge and helping to get these used	Commissioning and managing research programmes through Research Programme Consotia (PRCs), work research councils and public private partnerships	Public Service Agreement, research makes relevant information accessible and promotes an enabling environment in which it can be adopted	£ 1000 (over five years)	70*	2008-13 Strategy
International Development Research Centre	Empowerment through knowledge	Creation and adaptation of the knowledge that the people of developing countries judge to be of greatest relevance to their own development.	Invest financial, human and intellectual resources to cover the costs of conducting research as well as mentoring researchers	Mobilize local research capacity; Changes in practices, technologies, policies, and laws; Leverage additional resources for research	CA 190	455	2007-08
Swedish International Development Agency	Create conditions that will enable the poor to improve their lives	Build research capacity and support research to solve problems of the poor	Long-term support for a select number of universities and regional academic institutions, and provision of libraries, IT, and labs	Academic and research excellence	US 135 (6% of total aid)	43*	2006
Ford Foundation	To be a long-term and flexible partner with innovative leaders of thought and action	Support new ideas and programs that advance knowledge and improve lives	Grants for funding leaders, supporting social movements, building institutions, creating opportunities	Strengthen democratic values; reduce poverty and injustice; promote international cooperation; advance human achievement	US 802 (617 in grants, est. 100 is R4D)	350	2007
Wellcome Trust	Foster and promote research with the aim of improving human and animal health	Advancing and using knowledge, engaging society, developing people, and facilitating research.	Support basic, curiosity-driven, investigator-led research and career initiatives, in universities and other academic centres	New knowledge, high-quality researchers, enabling technologies, capacity development, and policy and practice	£702 (£614 in grants, includes £70 in R4D)	~ 40	2008
Rockefeller Foundation	Promote well-being: expand opportunities for poor or vulnerable people, help ensure that globalization's benefits are more widely shared	Search for new ideas with unusual potential for significant impact	Initiatives to seize opportunities created by the potential to break a bottleneck, take advantage of a current or anticipated tipping point, or scale-up a proven solution.	Measurable outcomes within 3 to 5 years in terms of innovate, influence and impact	US 168 (124 in grants, est. 40 is R4D)	130	2007

NOTE: * - Only staff within research department, excludes support staff located elsewhere within the organization (i.e. evaluation, administration).

There are no comparable data on research spending as there is no commonly accepted definition of development research. Based on informant interviews Jones and Young (2007) estimate that the twenty largest research donors (in decreasing order) as: Gates Foundation, USAID, European Union, IRD (France), DFID (UK), Wellcome Trust, SIDA, Medical Research Council (UK), IDRC, World Bank, NORAD (Norway), ACIAR (Australia), Ford Foundation, BMZ (Germany), CIDA, SDC (Switzerland), Japan, DGIS (Netherlands), Danida (Denmark), and Rockefeller.

Annex: Examples of Research Performers

Name	Mission	Strategy	Business Model	Metrics	Budget (million/yr)	Staff	Year (Annual Report)
Consultative Group on International Agricultural Research	Achieve sustainable food security and reduce poverty in developing countries	Sustainable agricultural growth by applying high-quality science to benefit the poor	Research on agricultural production; support for National Agricultural Research Systems, germplasm collection and improvement, policy research	Changes in agriculture, rural livelihoods, use of research outcomes, training developing country scientists	US 520	8000	2007
Institut de recherche pour le développement (France)	Science centrée sur les relations entre l'homme et son environnement dans les pays du Sud, dans l'objectif de contribuer à leur développement	Conception, animation, mobilisation au service de cette recherche	Research performed by French researchers, training grants to southern researchers	Number of scientific publications, hours of teaching, PhD theses, and grants to southern researchers	€ 22O	2235	2007
World Bank's Development Research Group	To provide practitioners with original knowledge to inform policy discussions and ultimately to help solve development problems	Building the climate for investment and sustainable growth; and investing in poor people to enable them to participate in development	Maintain world-class expertise to learn from practitioners involved in policy design and implementation in developing countries	Published books, journal articles, book chapters, working papers, datasets	US 25	100	2008, Research Highlights 2007
Overseas Development Institute (ODI)	Inspire and inform policy and practice which lead to the reduction of poverty, in developing countries	Lock together applied research, policy advice, and policy-focused dissemination and debate	Publications, fellowships, events, media	Take of ideas and evidence into development thinking and practice	£ 13	90	2008

NOTE: Jacques Gaillard (2007) estimates that, together with CIRAD, France has over 5000 staff dedicated to development research.